

## A NEW SPECIES OF *SCLEROBREGMA* (POLYCHAETA: SCALIBREGMATIDAE<sup>1</sup>) FROM OFF THE SOUTHEASTERN UNITED STATES

Rodney D. Bertelsen and Donald P. Weston

*Abstract.*—*Sclerobregma stenocerum*, a new polychaete species of the family Scalibregmatidae, is described from the continental shelf from Cape Lookout, North Carolina to Daytona Beach, Florida. The placement of *S. stenocerum* in the genus *Sclerobregma* and its affinity with the only other member of the genus, *S. branchiatum*, are discussed.

---

The scalibregmid genus *Sclerobregma* previously included only *Sclerobregma branchiatum* Hartman, 1965, as *S. branchiata*. This species has been collected at slope and abyssal depths (400 to 2,500 m) off New England.

During two recent studies, a new species of *Sclerobregma* was collected at shelf depths throughout the South Atlantic Bight (Cape Hatteras to Cape Canaveral). As part of a U.S. Bureau of Land Management sponsored study, Texas Instruments, Inc. sampled the benthos of seven cross-shelf transects from Cape Fear, North Carolina to Daytona Beach, Florida. Samples were taken seasonally from February to November, 1977 using a 0.06 m<sup>2</sup> box corer. Forty-six specimens of this new *Sclerobregma* species were collected at locations indicated in Figure 1.

An additional specimen was found off Cape Lookout, North Carolina during a cooperative University of Wisconsin-Virginia Institute of Marine Science study of continental shelf benthos. Samples were taken seasonally from May, 1977 through January, 1978 in an area extending from northeast of Oregon Inlet to east of Cape Lookout, using a 0.1 m<sup>2</sup> Smith MacIntyre grab.

### *Sclerobregma stenocerum*, new species Figs. 2-3

*Holotype.*—ENE of Daytona Beach, Florida; 29°34'N, 80°22'W; 44 m; Sta. 899-1 (7D); 2 September 1977; USNM 58955.

*Paratypes.*—1 specimen; NE of Jacksonville, Florida; 31°03'N, 80°26'W; 34 m; Sta. 230-1 (5E); 26 February 1977; USNM 58956.

1 specimen; E of Jacksonville, Florida; 30°23'N, 80°36'W; 35 m; Sta. 262-2 (6D); 1 March 1977; USNM 58957.

---

<sup>1</sup> The Greek word *bregma* has as its stem *bregmat-*. Therefore, the family name should be Scalibregmatidae (G. Steyskal, pers. comm.)

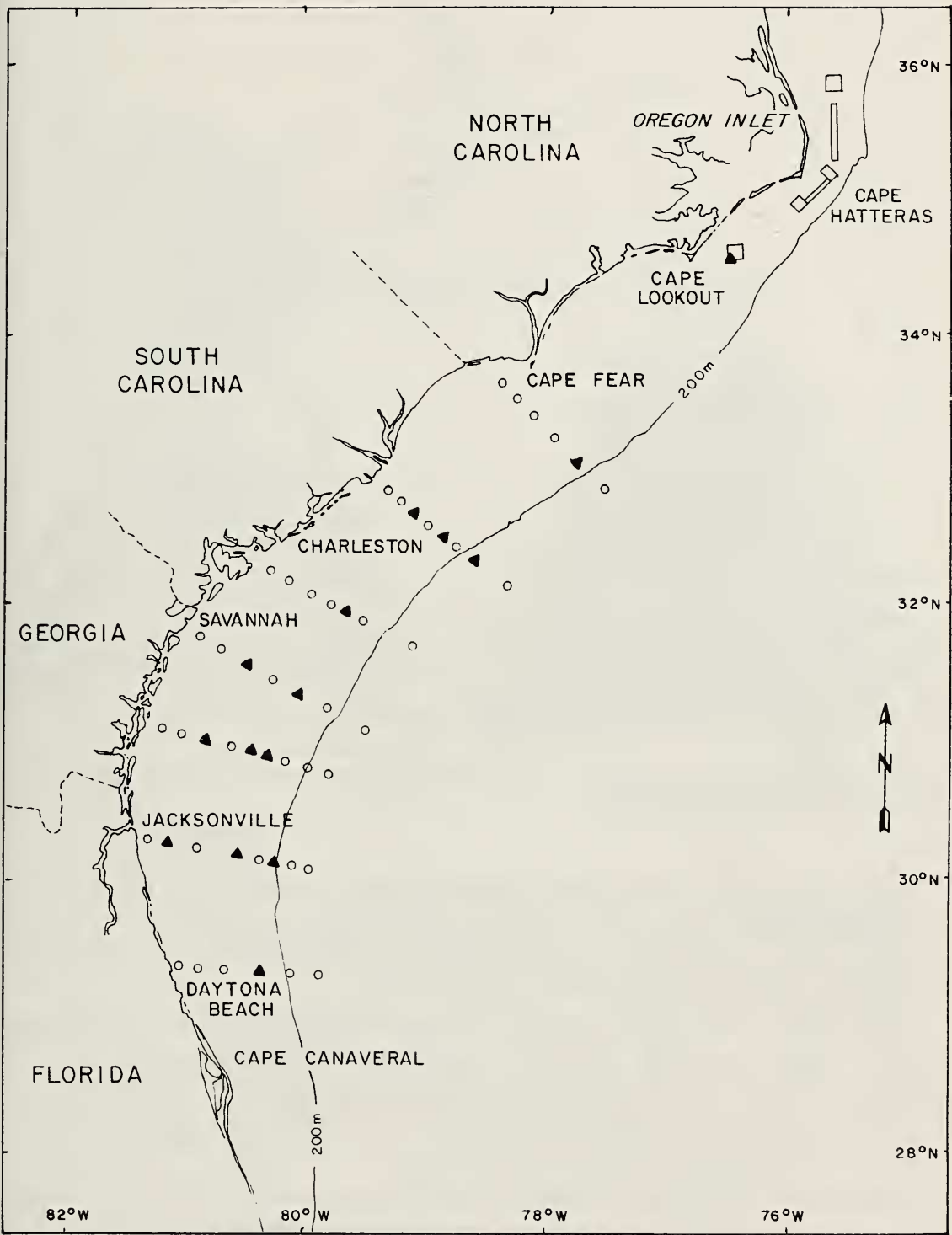


Fig. 1. Map of the South Atlantic Bight of the eastern United States showing sampling locations. Texas Instruments' stations indicated by small circles; Univ. of Wisconsin-Virginia Institute of Marine Science collection areas within open blocks. *Sclerobregma stenocerum* collection sites shown by darkened triangles.

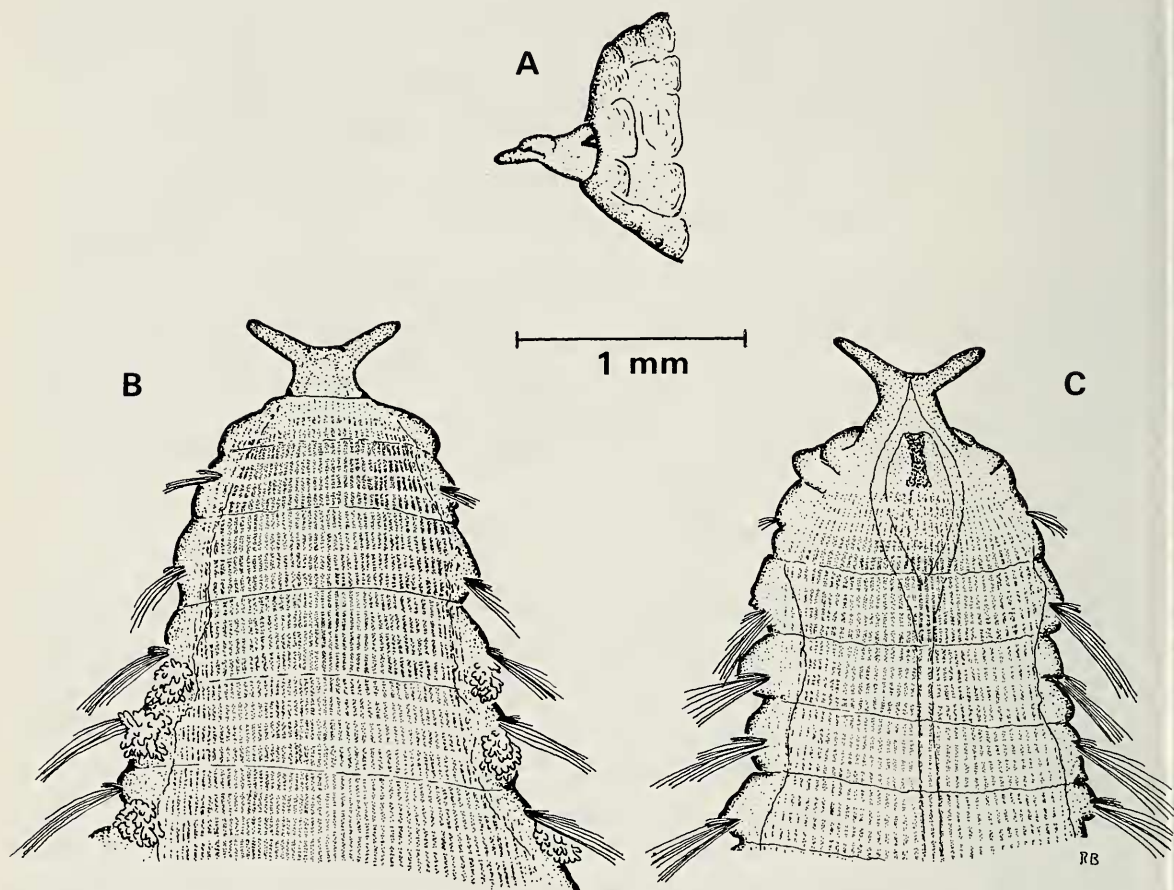


Fig. 2. *Sclerobregma stenocerum*: A, Prostomium, lateral view; B, Anterior end, dorsal view; C, Anterior end, ventral view.

1 specimen; E of Charleston, South Carolina; 32°40'N, 78°47'W; 37 m; Sta. 488-4 (2E); 13 May 1977; USNM 58958.

1 specimen; E of Cape Lookout, North Carolina; 34°34.5'N, 76°13.1'W; 38 m; Sta. 002-1; 31 May 1977; USNM 58959.

**Description.**—Holotype 8.3 mm in length, 1.2 mm in width, with 46 segments. Other specimens up to 23.1 mm long, 2.8 mm wide, with up to 49 segments. Body inflated anteriorly between setigers 6 and 17. Posterior cylindrical and slender. Segmental divisions obscured by transverse annulations and longitudinal striations (Fig. 2b, c).

Prostomium (Fig. 2a–c) T-shaped with long, slender frontal horns. Single pair of posterolateral eyes present on prostomium. Each eye V-shaped with points directed anteriorly (Fig. 2a). Eyes partly hidden by buccal segment in some specimens. Nuchal organs branched, originating at posterolateral margins of prostomium. Proboscis a soft, eversible pouch. Nuchal organs and proboscis generally retracted in preserved material. Buccal segment achaetous and apodous.

Branchiae 3 pairs; inserted posterior to notopodia of setigers 3–5 (Figs.

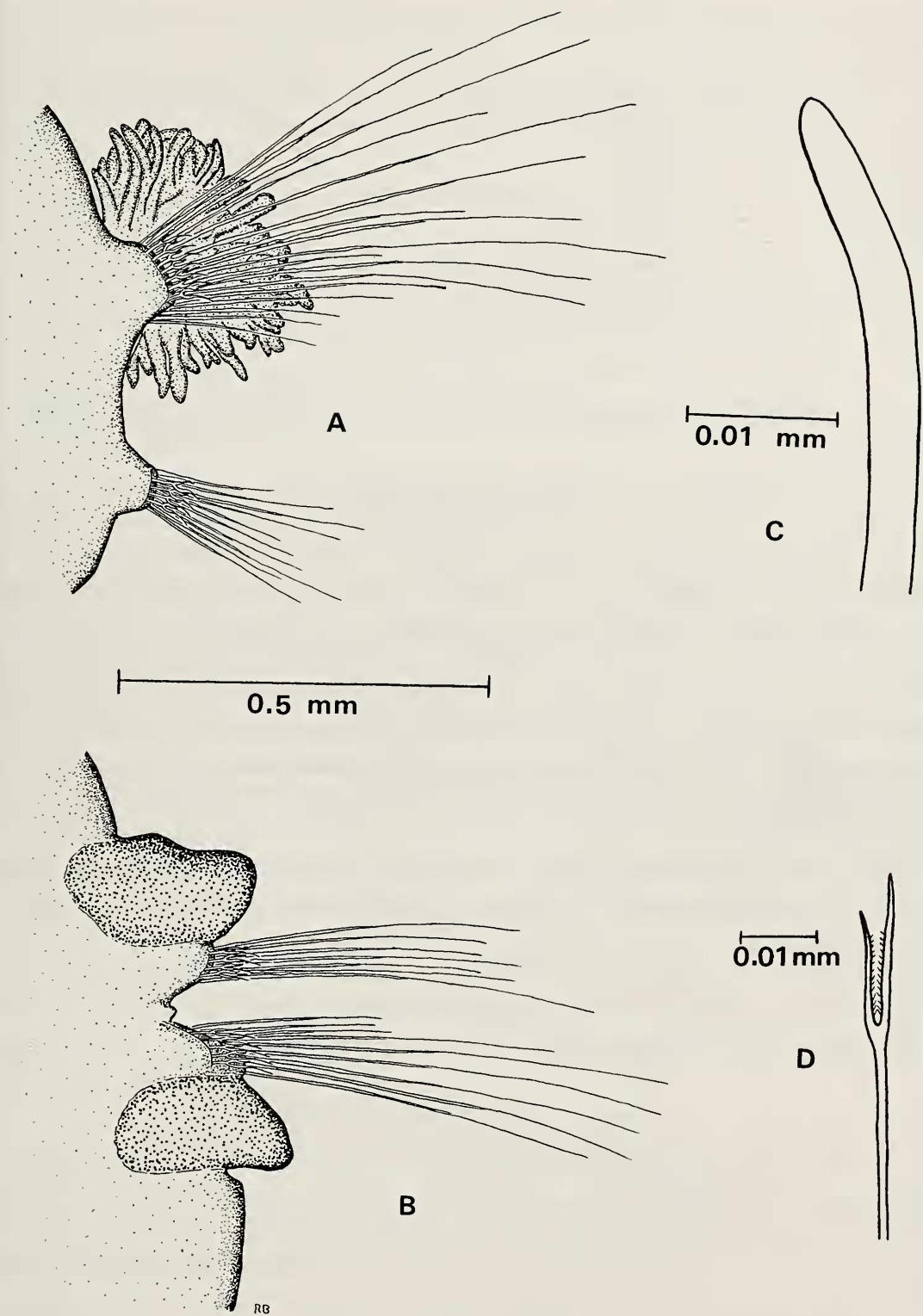


Fig. 3. *Sclerobregma stenocerum*: A, Fourth parapodium, anterior view; B, Posterior parapodium, anterior view; C, Acicular seta from anterior setiger; D, Furcate seta.



Table 1.—Distinguishing features of *Sclerobregma branchiatum* and *Sclerobregma stenocerum*.

|                | <i>Sclerobregma branchiatum</i>        | <i>Sclerobregma stenocerum</i> |
|----------------|--|--------------------------------|
| Eyes           | Absent                                 | Present                        |
| Frontal horns  | Short                                  | Elongate                       |
| Acicular setae | Long, pointed, hirsute                 | Very short, blunt, smooth      |
| Branchiae      | 4 pairs (setigers 2–5)                 | 3 pairs (setigers 3–5)         |
| Ventral cirri  | Some with slender, pale process at tip | Without terminal process       |

2b, 3a). Branchiae basically pinnate in form; each pinna with additional bifurcations.

Anterior 15 setigers with reduced parapodial lobes, lacking both dorsal and ventral cirri (Fig. 3a). Middle and posterior parapodia with inflated dorsal and ventral cirri, and small, rounded interramal organs (Fig. 3b). Cirri becoming more elongate in far posterior setigers. Both dorsal and ventral cirri usually retain reddish-brown pigmentation in alcohol.

Setae of 3 types: 1) smooth capillaries in both fascicles of all setigers; 2) short, curved, blunt acicula (Fig. 3c) in both rami of first 2–3 setigers (2–6 acicula per fascicle); 3) furcate setae (Fig. 3d) in both rami of all setigers from the third. Tines of furcate setae of unequal length and spinous along inner margins. Up to 14 furcate setae per fascicle, inserted in row anterior to capillary setae.

Ventral and ventrolateral anal cirri present; exact number indeterminable as cirri are easily detached. Number of anal cirri ranging from 0–3 on specimens examined.

*Distribution*.—Continental shelf, North Carolina to Florida; 17 to 218 m.

*Etymology*.—*Steno*, Greek for narrow; *Keras*, Greek for horn; referring to the long, narrow frontal horns on the prostomium.

Discussion

Following Ashworth (1901) and Kudenov and Blake (1978), *Sclerobregma stenocerum* is referable to the genus *Sclerobregma* on the basis of the ar-enicoliform body and the presence of dorsal and ventral cirri, acicular setae and branchiae. *S. stenocerum* differs from the generic description (Hartman, 1965) in that eyes are present. While the presence or absence of eyes is a valid specific character, their presence in *S. stenocerum* is insufficient justification to exclude it from the genus (J. Kudenov, pers. comm.). *S. stenocerum* may be readily distinguished from *S. branchiatum* by the characteristics given in Table 1.

Examination of the type-material of *Sclerobregma branchiatum*, provided

by the Allan Hancock Foundation, revealed two errors in the original description. Hartman (1965; p. 185) stated that the “upper cirri are longest, terminating in slender pale tips” (see also Hartman’s Plate 42, Fig. C). In the type-material, the ventral, rather than the dorsal cirri, bear slender, pale tips. Only the six anteriormost ventral cirri have this terminal structure, while the remaining ventral cirri and all dorsal cirri are blunt and inflated as in *S. stenoceram*.

Secondly, Hartman (1965; Plate 42, Fig. C) illustrated a small cirrus-like projection beneath the “neuropodia” (actually the notopodia). Though not discussed in the text, the figure caption refers to this structure as a ventral cirrus. The structure could not be found on the holotype (AHF Poly 0484) or the 17 paratypes (AHF Poly 0485) examined and is presumed to be an error in the figure.

Acknowledgments

The authors wish to thank Dr. Jerry Kudenov of the University of Southern California for his helpful comments and loan of type-material from the Allan Hancock Foundation. Valuable advice provided by Dr. Kristian Fauchald of the U.S. National Museum, and his critical review of the manuscript is also gratefully acknowledged.

This material is based on research partially supported under Contract No. AA550-CT7-2 from the U.S. Bureau of Land Management to Texas Instruments, Inc. Additional support was received through the National Science Foundation under Grant No. OCE77-08531 and by the National Oceanic and Atmospheric Administration’s office of Sea Grant, Dept. of Commerce through an institutional grant to the University of Wisconsin.

Contribution No. 930 from the Virginia Institute of Marine Science.

Literature Cited

Ashworth, J. H. 1901. The anatomy of *Scalibregma inflatum* Rathke.—Quart. J. Micro. Sci., London 45:237–309.

Hartman, O. 1965. Deep-water benthic polychaetous annelids off New England to Bermuda and other North Atlantic areas.—Allan Hancock Foundation Occasional Paper 28:1–378.

Kudenov, J. D., and J. A. Blake. 1978. A review of the genera and species of the Scalibregmidae (Polychaeta) with descriptions of one new genus and three new species from Australia.—J. Nat. Hist. 12:427–444.

(RDB) Normandeau Associates, 15 Pickering Ave., Portsmouth, New Hampshire 03801; (DPW) Department of Invertebrate Ecology, Virginia Institute of Marine Science, and School of Marine Science, College of William and Mary, Gloucester Point, Virginia 23062.